

### **DETAILED ACTION**

Applicant's arguments filed 5/17/10 have been fully considered but they are not persuasive. Previous rejections and other issues not addressed below are withdrawn.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5,9,10,12,16 are rejected under 35 U.S.C. 102(b) as being anticipated by Aven (EP 1023832; 8/2/00). Aven teaches an aqueous, concentrate suspension comprising an alkylpolyglycosides (oil based adjuvant), a hydrotrope and dispersants. See paragraphs 31,45 and 46. Aven teaches that the concentrate can comprise approximately 25% adjuvant (calculated from the addition of (g/L): 400 active, 500 adjuvant, 100 surfactant, and 800; then divided total value into 500 g/L adjuvant to arrive at about 25% adjuvant). See abstract. A suspension equates to dispersion of active particles (solid) in a liquid which meets the limitation of second phase (solid) being dispersed in a continuous phase. See abstract, paragraph 53. Aven also teaches the addition of a liquid active ingredient to the composition which meets the claim limitation of the second phase comprising a water-immiscible liquid. See paragraph 26. With respect to claim 12 the composition in about 25% oil based adjuvant meets the limitation of the oil base adjuvant comprising a dispersed agrochemical concentrate therein.

*Response to Applicants Arguments*

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Applicants point out that in order to determine if a give APG is water-soluble or water-insoluble, the alkyl chain length and the degree of polymerization must be considered for the APG. The Applicants point out that Aven teaches C8-C10 and C12-C14 APGs possessing a 1.1-1.6 degree of polymerization which are water-soluble APGs. The Applicants argue that Aven is not directed to water-insoluble APGs as presently claimed. The Examiner argues that the Hill et al. reference provided by the Applicants teaches that C16 alkyl chain and above APGs are oil base adjuvants (making them water-insoluble APGs as claimed). The Examiner again points out that Aven teaches C16-C18 alkyl APGs. The Examiner maintains that Applicants have not shown or demonstrated that Aven's C16-C18 alkyl APGs are not water-insoluble.

The Applicants argue that Aven does not disclose or make obvious an agrochemical concentrate comprising an oil based adjuvant and a hydrotrope that solubilizes the adjuvant. Aven does not disclose or make obvious an agrochemical concentrate comprising a continuous water-containing single phase comprising an oil-based adjuvant and a hydrotrope that solubilizes the adjuvant. Applicants maintain the position that Aven's alkylpolyglycosides (APGs) are water soluble (paragraphs 3 and 9) rather than water insoluble as disclosed in the instant claims. The Applicants argue that Aven does not motivate a skill person to replace water soluble APGs with an oil based adjuvant.

The Examiner argues that alkylpolyglycosides (APGs) such as Glucopons (polymeric structure) are combined with hydrotropes. Glucopons are not water soluble; therefore, Glucopons are structurally considered lipophilic or hydrophobic which would characterize them as being oil soluble or oil-based compounds. See Aven page 5 lines 26-28. The Applicants use the Hill et al. reference to point out that C16 and longer alkyl chains give water insoluble APGs (Glucopons),

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and therefore, by deduction the Hill et al. reference teaches that shorter chains such as C8/C10 and C12/C14 attached to the Glucopons would render the shorter chained Glucopons taught by Aven water soluble. The Examiner agrees with the Applicants in terms of the water solubility of Aven's exemplified Glucopon 215CSUP (C8/10 alkyl) and Glucopon 600CSUP (C12/14 alkyl). However, the Examiner reiterates that Aven is not limited to the short alkyl chained Glucopons. In fact, it is important to note that Aven at paragraph 31 teaches APGs having alkyl chains ranging from C8 to C18, and therefore, Aven does teach the use of C16 and longer alkyl chained Glucopons which are water insoluble according to the Hill et al reference. With respect to the instant claims to a continuous water-containing single phase, Aven's concentrate like instant concentrated may contain an oil-based adjuvant and a hydrotrope. Since Aven's concentrates are of the same content as the concentrates of the instant invention, Aven's concentrate would automatically possess a continuous single phase as the instant concentrate.

The Applicants argue that although Aven teaches a combination of APGs such as Glucopons with hydrotropes, Aven does not teach the use of Glucopons that are oil based as claimed. In fact Applicants points out that Aven teaches Glucopon 215CSUP (C8/10 alkyl) and Glucopon 600CSUP (C12/14 alkyl) which are both water soluble as opposed to oil soluble. Note instant claims would require oil based Glucopons. The Applicants use the Hill et al. reference to point out that C16 and longer alkyl chains give water insoluble APGs (Glucopons), and therefore, by deduction the Hill et al. reference teaches that shorter chains such as C8/C10 and C12/C14 attached to the Glucopons would render the shorter chained Glucopons taught by Aven water soluble. The Examiner agrees with the Applicants in terms of the water solubility of Aven's exemplified Glucopon 215CSUP (C8/10 alkyl) and Glucopon 600CSUP (C12/14 alkyl).

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However, the Examiner would like to point out that Aven is not limited to the short alkyl chained Glucopons. In fact, it is important to note that Aven at paragraph 31 teaches APGs having alkyl chains ranging from C8 to C18, and therefore, Aven does teaches the use of C16 and longer alkyl chained Glucopons which are water insoluble according to the Hill et al reference.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6,13-14 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aven (EP 1023832) as applied to claims 1-5,9,10 above. Aven teaches that the suspension concentrates are processed by well established procedures including mixing and / or milling of actives with other substances such as solvents and adjuvants. See paragraphs 53,63,64 . Aven teaches that the concentrate can be diluted in water. See paragraph 6. Aven does not specifically teach a) that the continuous phase is prepared first, b) the milling of the solid in water, c) the dilution of the concentrate in a spray tank of water or encapsulation of ingredients (the second phase). The specification does not provide results related to the formulation of the continuous phase first versus the methodology as recited in Aven. In the absence of such results, it is obvious that the ordering of the steps will yield the same concentrate (possessing the same chemical and physical characteristics) since Aven and instant invention teaches the mixing / milling of the same chemicals. Both inventions disclose that the concentrate is diluted in water. Therefore whether the concentrate is diluted in spray tank or in some container is immaterial, i.e.

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the composition should be the same. In the absence of unexpected results, the concentrate diluted in the spray tank should be identical to the concentrate diluted in any other container. With respect to micro-encapsulation (encapsulation), it is standard practice to encapsulate materials to delay their release. This signifies a common practice in the herbicide art. There is nothing unobvious about encapsulating materials in the herbicide art. (e.g. see USPN 5708073).

*Response to Applicants' Argument*

Claims 19 and 20 recite specifically named hydrotropes and oil-based adjuvants respectively. However, the Examiner argues that Aven broadly teaches the hydrotrope and oil-based adjuvant combination. In the absence of unexpected results for the specifically claimed combination, Aven's teaching of the combination of hydrotropes and oil-based adjuvants makes the specifically claimed combinations obvious.

The Applicants argue that Aven does not motivate a skill person to replace water soluble APGs with an oil based adjuvant. The Examiner argues that alkylpolyglycosides (APGs) such as Glucopons (polymeric structure) are combined with hydrotropes. Glucopons are not water soluble; therefore, Glucopons are structurally considered lipophilic or hydrophobic which would characterize them as being oil soluble or oil-based compounds. See Aven page 5 lines 26-28.

The Applicants argue that although Aven teaches a combination of APGs such as Glucopons with hydrotropes, Aven does not teach the use of Glucopons that are oil based as claimed. In fact Applicants points out that Aven teaches Glucopon 215CSUP (C8/10 alkyl) and Glucopon 600CSUP (C12/14 alkyl) which are both water soluble as opposed to oil soluble. Note instant claims would require oil based Glucopons. The Applicants use the Hill et al. reference to point out that C16 and longer alkyl chains give water insoluble APGs (Glucopons), and

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therefore, by deduction the Hill et al. reference teaches that shorter chains such as C8/C10 and C12/C14 attached to the Glucopons would render the shorter chained Glucopons taught by Aven water soluble. The Examiner agrees with the Applicants in terms of the water solubility of Aven's exemplified Glucopon 215CSUP (C8/10 alkyl) and Glucopon 600CSUP (C12/14 alkyl). However, the Examiner would like to point out that Aven is not limited to the short alkyl chained Glucopons. In fact, it is important to note that Aven at paragraph 31 teaches APGs having alkyl chains ranging from C8 to C18, and therefore, Aven does teach the use of C16 and longer alkyl chained Glucopons which are water insoluble according to the Hill et al reference.

Claims 1-6,9,10,12-14,16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aven (EP 1023832). Aven teaches an aqueous, concentrate suspension comprising C8 to C16 alkylpolyglycosides such as Glucopons (oil based adjuvant) and a hydrotrope. See page 5 paragraph 31. Aven teaches that the concentrate can comprise approximately 25% adjuvant (calculated from the addition of (g/L): 400 active, 500 adjuvant, 100 surfactant, and 800; then divided total value into 500 g/L adjuvant to arrive at about 25% adjuvant). See abstract. A suspension equates to dispersion of active particles (solid) in a liquid which meets the limitation of second phase (solid) being dispersed in a continuous phase. See abstract, paragraph 53. Aven also teaches the addition of a liquid active ingredient to the composition which meets the claim limitation of the second phase comprising a water-immiscible liquid. See paragraph 26. With respect to claim 12 the composition in about 25% oil based adjuvant meets the limitation of the oil base adjuvant comprising a dispersed agrochemical concentrate therein. Aven teaches that the suspension concentrates are processed by well established procedures including mixing and / or milling of actives with other substances such as solvents and adjuvants. See paragraphs 53,63,64.

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Aven teaches that the concentrate can be diluted in water. See paragraph 6. Aven does not specifically teach a) a suspension concentrate comprising C16/18 Glucopons b) that the continuous phase is prepared first, c) the milling of the solid in water, d) the dilution of the concentrate in a spray tank of water or encapsulation of ingredients (the second phase). One would have been motivated to employ a C16/C18 Glucocon in the concentrate. One would have been expected to do this, because Aven makes the suggestion in paragraph 31 (Note, Hill et al teaches that C16/18 are water insoluble). The specification does not provide results related to the formulation of the continuous phase first versus the methodology as recited in Aven. In the absence of such results, it is obvious that the ordering of the steps will yield the same concentrate (possessing the same chemical and physical characteristics) since Aven and instant invention teaches the mixing / milling of the same chemicals. Both inventions disclose that the concentrate is diluted in water. Therefore whether the concentrate is diluted in spray tank or in some container is immaterial, i.e. the composition should be the same. In the absence of unexpected results, the concentrate diluted in the spray tank should be identical to the concentrate diluted in any other container. With respect to micro-encapsulation (encapsulation), it is standard practice to encapsulate materials to delay their release. This signifies a common practice in the herbicide art. There is nothing unobvious about encapsulating materials in the herbicide art. (e.g. see USPN 5708073).

*Response to Applicants' Argument*

The Applicants argue that Aven does not disclose or make obvious an agrochemical concentrate comprising an oil based adjuvant and a hydrotrope that solubilizes the adjuvant. Aven does not disclose or make obvious an agrochemical concentrate comprising a continuous

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water-containing single phase comprising an oil-based adjuvant and a hydrotrope that solubilizes the adjuvant. Applicants maintain the position that Aven's alkylpolyglycosides (APGs) are water soluble (paragraphs 3 and 9) rather than water insoluble as disclosed in the instant claims. The Applicants argue that Aven does not motivate a skill person to replace water soluble APGs with an oil based adjuvant.

The Examiner argues that alkylpolyglycosides (APGs) such as Glucopons (polymeric structure) are combined with hydrotropes. Glucopons are not water soluble; therefore, Glucopons are structurally considered lipophilic or hydrophobic which would characterize them as being oil soluble or oil-based compounds. See Aven page 5 lines 26-28. The Applicants use the Hill et al. reference to point out that C16 and longer alkyl chains give water insoluble APGs (Glucopons), and therefore, by deduction the Hill et al. reference teaches that shorter chains such as C8/C10 and C12/C14 attached to the Glucopons would render the shorter chained Glucopons taught by Aven water soluble. The Examiner agrees with the Applicants in terms of the water solubility of Aven's exemplified Glucopon 215CSUP (C8/10 alkyl) and Glucopon 600CSUP (C12/14 alkyl). However, the Examiner reiterates that Aven is not limited to the short alkyl chained Glucopons. In fact, it is important to note that Aven at paragraph 31 teaches APGs having alkyl chains ranging from C8 to C18, and therefore, Aven does teaches the use of C16 and longer alkyl chained Glucopons which are water insoluble according to the Hill et al reference. With respect to the instant claims to a continuous water-containing single phase, Aven's concentrate like instant concentrated may contain an oil-based adjuvant and a hydrotrope. Since Aven's concentrates are of the same content as the concentrates of the instant invention, Aven's concentrate would automatically possess a continuous single phase as the instant concentrate.



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***Claim Objection/Allowable Subject Matter***

Claims 7 remains objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claims 8 and 11 are allowable. The prior does not teach or suggest the instant invention comprising the second phase as a micro-emulsion or a third phase.

***Telephonic Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alton N. Pryor whose telephone number is 571-272-0621. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Alton N. Pryor/

Primary Examiner, Art Unit 1616